



C A M - p l u s

Advanced Cable Meter
User Manual

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1. Introduction

Thank you for purchasing our cable alignment meter. It should provide years of trouble free operation.

Please read this guide to familiarize yourself with all the features and options available.

Take care of the meter by keeping it warm and out of the rain.



2. Supplied items



Maxpeak CAM-plus
Cable Alignment Meter with
protective rubber grips



Spare F to F Connector



IEC to F adapter



RS 232 Cable



Car socket charger



Wall socket charger

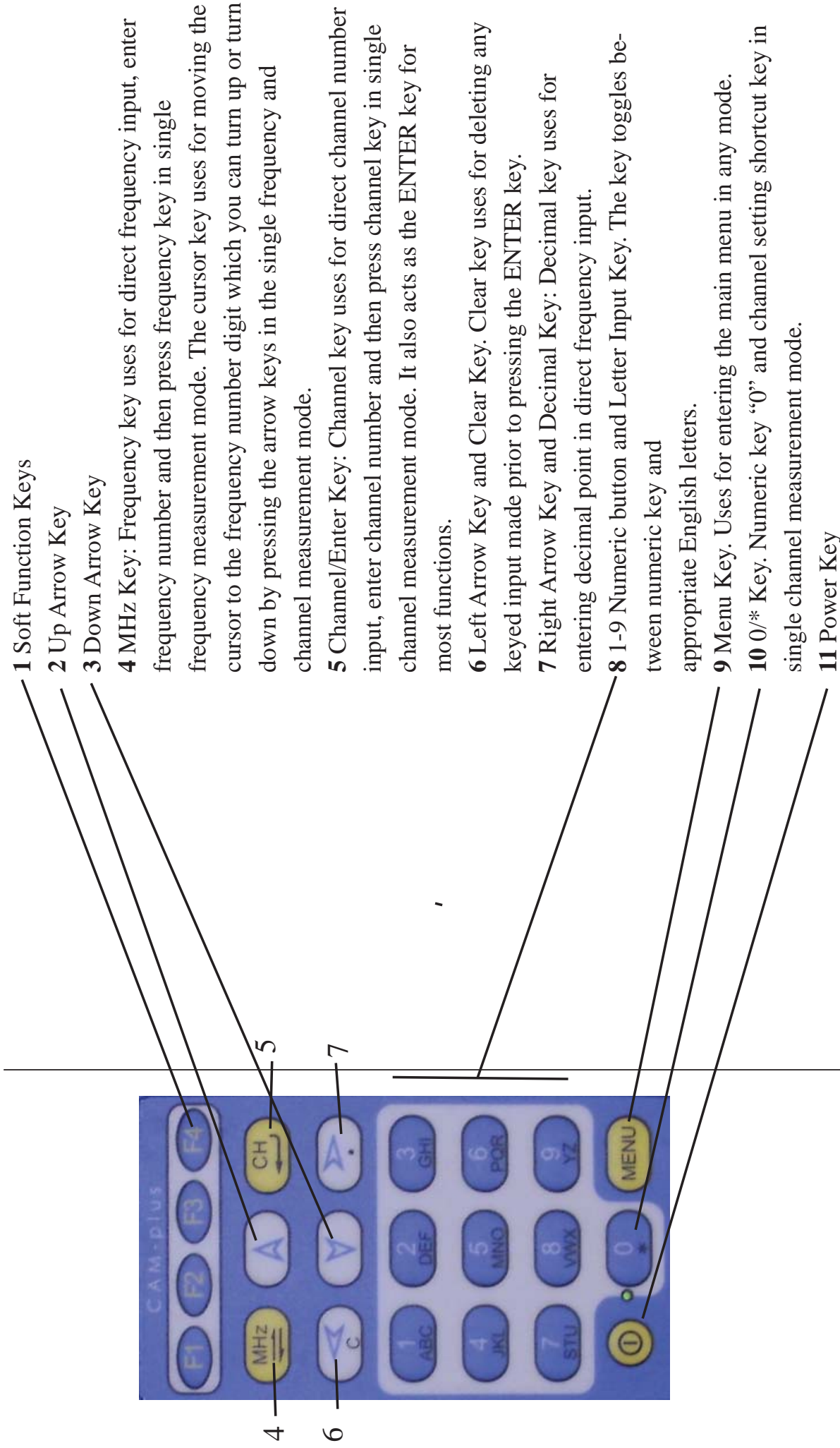


Mains lead for region

3. Overview

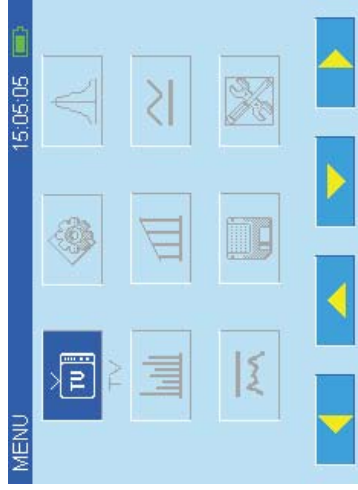


4. Keys

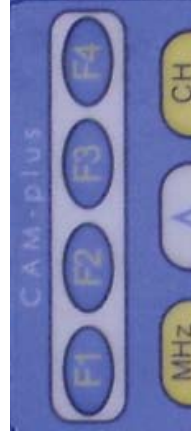








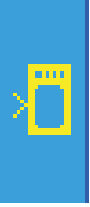
5. Functions keys















In the display window at the bottom there is symbols just above the function buttons



These symbols explains the function in the corresponding function key



	Up
	Down
	Right
	Left
	Enter
	Go back
	Video measurements

	V/A measurements		Save file
	Single freq. measurements		Edit
	QAM measurements		Star to test
	Spektrum		Zoom in
	Speaker vol		Zoom out
	Delete file		Increase value
	Load file		Decrease value


6. Charging procedure

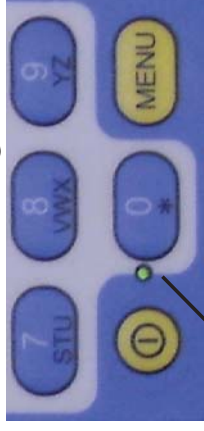
The meter is delivered with a nominal charge only. It needs 24 hours of initial charge before usage. The battery reaches full capacity after a couple of charges.

Charging procedure:

- Locate the charging socket at the right hand side at the bottom of the instrument
- Plug the lead from either the included car¹ or wall socket chargers to the instrument.

⚠ Please note that warranty is not valid if another non supplied charger is used.

- Now the battery is charging. A full charge will take 3 hours.
-  Removing the charger from the charging socket puts the instrument in Standby-mode.
- Press Power key to put the meter in meter mode² while charging, after 10 minutes the meter returns to the charge screen



- During charging the indicator is RED once fully charged it goes GREEN



The charging socket is located at the bottom on the right hand side of the instrument



Only use the included car or wall socket chargers for charging the meter.

¹ Some vehicles need ignition turned on in order to provide power to the cigarette lighter socket.

² Using the instrument while charging may result in less accurate measurements.

7. Power up and shut down



Press the Power key to switch ON and OFF the instrument

- To turn the meter on, keep the “Power Key” button pressed for one second.

At startup, there will be a welcome screen.

- Then the meter moves to the main select screen:



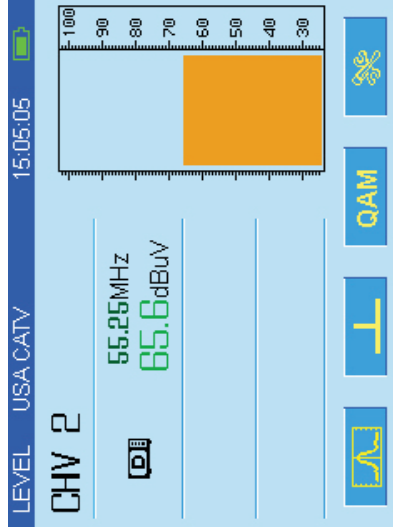
- Now use the “Function keys” or arrows to select desired function.

- Also the following short keys can be used:

1. LEVEL (Keypad “1”) - Signal level measurement of both analog channel and digital channel.
2. AUTO (Keypad “2”) - Auto measurement
3. SPECT (Keypad “3”) – Spectrum analysis
4. SCAN (Keypad “4”) –Scan measurement
5. TILT (Keypad “5”) – Tilt measurement
6. VOLT (Keypad “6”) – Voltage measurement
7. C/N (Keypad “7”) – Carrier to noise ratio measurement
8. FILE (Keypad “8”) – File management
9. SETUP (Keypad “9”) – Setup menu

- To turn meter off, keep the “Power Key” button pressed for one second.

8. Level measurement



● At first set the current channel type. Press “0/*” to display channel setting window.

If the channel type is digital channel, it will display:

Channel – channel number

Select – Marked “\” if the current channel is available.

Type – Digital or analog channels

Freq – Center frequency.

BW – Bandwidth of digital channel.

Mode – Modulation type.

SR – Symbol rate

Save & Return

If the channel type is analog channel, it will display:

Channel – channel number

Select – Marked “\” if the current channel is available

Type – Digital or analog channel

Freq – Video carrier frequency

AIF – Audio IF

Save & Return

● Using UP/DOWN arrow key move the cursor and using LEFT/RIGHT arrow key toggle options or directly enter parameter using keypad. Move the cursor to “Save & Return” and press F3 or CH/ENTER key after setting the parameters.

● In the single digital channel measurement mode, the channel number is shown “CHD” instead of “CHV” that the analog channel number is shown.

9. QAM measurement

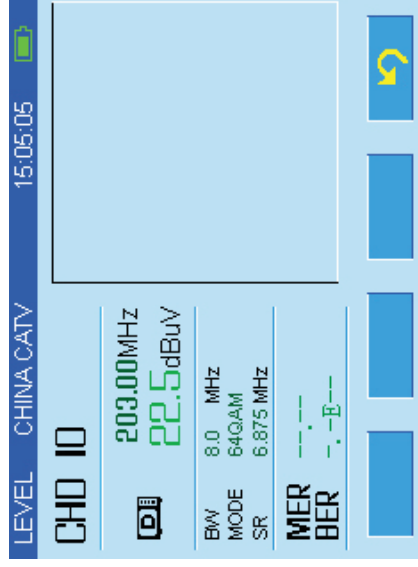
⚠ If the channel is Digital the QAM measurements can be selected.

⚙ In this case both the

⚙ MER value

⚙ BER value

are is shown



10. Auto measurement

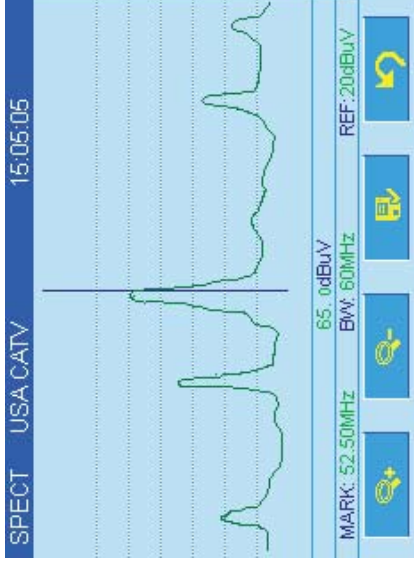
AUTO CHINA CATV 16:30:18			
File	Date	Time	
A01	09/06/16	08:38	
A02	09/06/17	09:30	
B01	09/06/17	09:35	
B02	09/06/17	09:35	
B03	09/06/17	09:38	
C01	09/06/17	09:50	
-----	--/--/--	--:--	
-----	--/--/--	--:--	

AUTO CHINA CATV 16:30:18

NO.	CH	FREQ	AVD	DIGI	MER	BER	ANAL
1	3	61.25	A				77.5
2	2	55.25	A				78.6
3	4	67.25	A				77.2
4	5	77.25	A				79.2
5	95	91.25	A				79.8

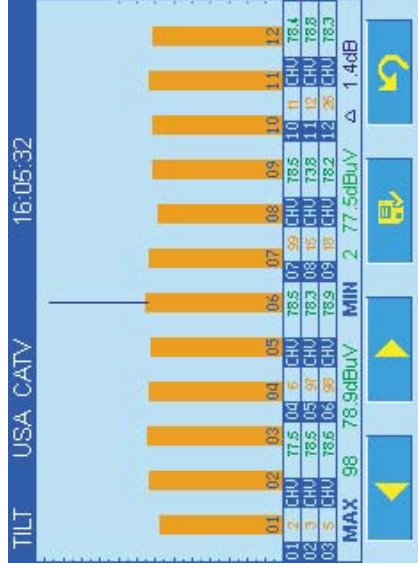
- The unit will show the list of files in storage. Using UP/DOWN arrow key select an empty file and press F1 to create a new auto test file. Using keypad enter file name, using UP/DOWN arrow key move the cursor, using LEFT/RIGHT key select the channel number of No.1 to No.5 channels; Select “Save & Return” and press F3.
- Using UP/DOWN arrow key select an existing file and press F1 to edit the saved auto test file.
- Using UP/DOWN arrow key select an existing file and press F3 to implement the auto test. After the test is finished, press F3 to save the tested result. The saved file can be viewed in the “FILE MANAGEMENT” mode.

11. Spectrum measurement



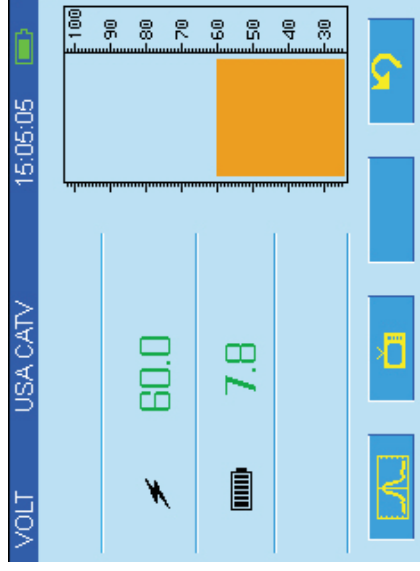
- Using keypad input center frequency and press MHz key, or input channel number and press CH/ENTER, the unit will show spectrum analysis.
- Press F1 to zoom in and press F2 to zoom out, the BW (bandwidth) toggles among 15MHz, 30MHz, 150MHz.
- Press LEFT/RIGHT key to move the cursor to see the tested signal strength.
- Press UP/DOWN arrow key to change the reference level by 5dB step.
- Press F3 to save file.
- Press F4 to return to the main menu.

12. Tilt measurement



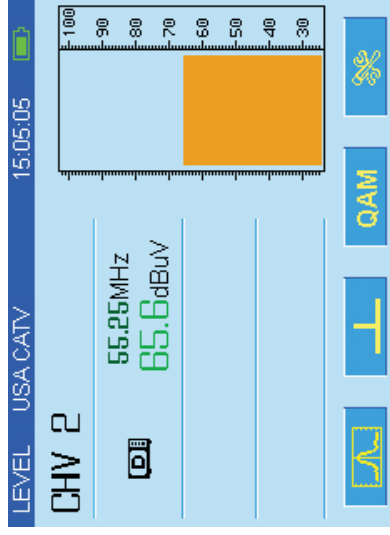
- The unit will display the max channel number and signal strength; the min channel number and the signal strength; the difference between the max and the min.
- Move cursor to select a channel and press UP/DOWN key to change the channel number.
- Press F3 to save file.
- Press F4 to return to the main menu.
- Signal strengths of 12 channels display in the screen simultaneously. Press F1 or F2 to select the channel in TILT measurement and press the LEFT or RIGHT arrow key to change the channel number of selected channel.
- The max signal strength, min signal strength and their difference display on the screen.
- Press F4 to return to the main menu.

13. Volt measurement



- The meter will automatically identify “AC” or “DC” of the trunk voltage, and display the actual voltage on the screen.
- The battery voltage is also display.
- Typically at the cable demarcation point outside the structure, there will be no trunk voltage.
- Press F4 to return to the main menu.

14. C/N measurement.

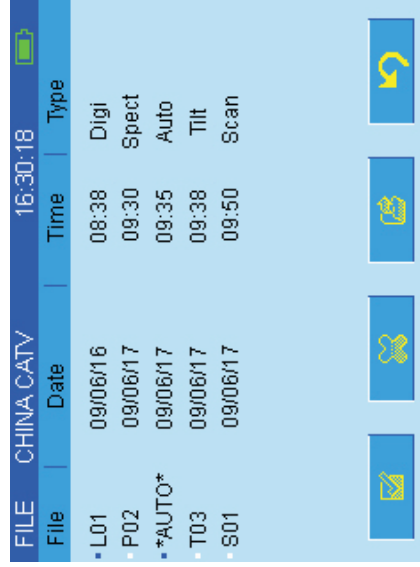


- Directly input channel number and press “CH/ENTER” key to select the channel to be tested.

!Note:

The function affects when the signal input level is greater than 60 dBuV.

15. File management.



FILE	CHINA CATV	16:30:18	
File	Date	Time	Type
*L01	09/06/16	08:38	Digi
*P02	09/06/17	09:30	Spect
AUTO	09/06/17	09:35	Auto
*T03	09/06/17	09:38	Tilt
*S01	09/06/17	09:50	Scan

- All the files saved in different measurement modes will be listed.
- Using UP/DOWN arrow key highlight the file and press F1 to select one or more files, press F2 to delete selected files.
- Using UP/DOWN arrow key highlight one file and press F3 to read the file.
- Press F4 to return to the main menu.

16. Setup.

● **SHUTDOWN TIME**

You can select the auto shutdown time among below options:

3MIN

5MIN

10MIN

ALWAYS ON

● **DATE & TIME**

Set the date & time of the meter.

● **VOLUME SETTINGS**

Set the sound volume of the speaker.

● **LEVEL UNITS**

You can select the unit of the meter among:

dBuV

dBmV

dBm

● **SELECT USER PLAN**

Using LEFT/RIGHT key highlight the icon “SELECT USER PLAN” and press the CH/ENTER key, the meter enters the “SELECT USER PLAN” menu.

Using UP/DOWN key select the user plan you want and press CH/ENTER to confirm.

17 Setup.

● **EDIT USER PLAN**

In the main SETUP menu, using the LEFT/RIGHT key highlight the icon “EDIT USER PLAN” and press the CH/ENTER key, the meter enters the “EDIT USER PLAN” menu.

Using UP/DOWN arrow key highlight the channel and press F3 to enter the CHANNEL SETUP menu.

Disable the checkbox of “Select” of the channel if you want to omit the channel in test. Select “Save & Return” after setting up.

● **LEARN USER PLAN**

In the main SETUP menu, using the LEFT/RIGHT key highlight the icon “LEARN USER PLAN” and press the CH/ENTER key, the meter enters the “LEARN USER PLAN” menu.

Select “USER PLAN 1” or “USER PLAN 2” that you want to create to fit your CATV system.

The unit will show below content:

- 1: Please connect to CATV
- 2: Select channel plan
3. Press F3 to Start

Using the F1, F2 keys to select the channel plan of your TV system and then press CH/ENTER key to start. After finished select “YES” and press CH/ENTER key to confirm in the pop-up menu.

⚠ **Note:** The unit needs to access cable television system.

💡 *The unit will automatically select the channels which signal strength is greater than -40dBuV and collect them in to user channel plan, recognizing analog or digital channel. However, due to the complexity of the actual signal, the user may also need to re-edit it.*

18 SETUP.

● PROBE COMPENSATION

The probe compensation value shows in the bottom of the screen, press F3 to enter. Using LEFT key or RIGHT key move the cursor and using F1/UP key or F2/DOWN key to increase or decrease the value. Press F3 to save and return.

● VALUE AMENDMENT

The meter supplies you such a function to calibrate it manually. The user just needs a accurate meter or signal generator to compare the measurement value and save calibration value.

The unit enters value amendment menu.

On the lower left of the screen it displays the amendment value of current channel as “Single Amend: +0.0” press F1 or F2 to adjust the amendment value and press F3 to save. When saved successful green value number turns black.

In this mode you can change the channel number using LEFT/RIGHT arrow key or directly input the channel number using keypad.

Continue to adjust the amendment value of other channels until finished.

● LIMIT SETUP

In the SETUP menu select LIMIT SETUP and press F3 to enter, it displays the max value and min value of limitation. Max / Min / Save&Return

The set Limit value will reflect in the SCAN test result.

● LOAD DEFAULT

If the settings are unexpected and you want to restore the initial settings, select this item and press F3. The unit will display a confirmation menu:

Are you sure? Yes / No

19. Battery replacement



Remove the 4 screws located at the upper back side of the instrument.



Take away the battery lid and disconnect the current battery pack.



Attach the socket of the new battery to the connector on the instrument. Put the battery pack in place and put back the lid and screw.

The meter is powered by a replaceable NiMH battery pack. As with all batteries the pack will deteriorate in with time.

! To maximize the lifetime of the battery pack, make sure to use/discharge and recharge the meter frequently

When the battery pack needs to be replaced, spare packs can be ordered from an authorised reseller.

! Do not use any other kind of non original batteries. A different pack can damage the meter and invalidate the warranty.

Battery Replacement:

Changing the battery pack is a simple procedure.

- Unscrew the 4 screws and take away the battery lid.
- Remove the battery and disconnect the plug.
- Connect the new battery pack to the plug.
- Place the pack as shown in the bottom picture to the left.
- Initially charge the meter for 24 hours as described in Chapter 2 - Charging.

20. Specification

- Full band 5 MHz to 870 MHz
- Bandwidth 6, 7 or 8 MHz
- Replaceable F-connector
- 75 Ohm imp 20 to 120 dBuV
- RF Level as dBm or dBuV
- True MER or SNR displayed in dB
- RF, BER, MER displayed together
- Scan mode to show found channels
- Pre and Post BER in numerical value
- Full spectrum pixels (zoom 1x2x or 4x)
- Backlit colour graphics display 320*240
- Integrated rechargeable NiMH battery
- Charged from wall or car adaptor
- Trunk voltage measurement upto 100 V Ac
- Run time in excess of 4 hours
- Built in audible sounder
- 200 channel plans
- Tilt mode (up to 12 channels)
- Upgrade of settings, firmware and language via computer
- 210 * 95 * 50 mm , 600 grams

The manufacturer reserves the right to change this specification without prior notice

Warranty

This product carries a manufactures warranty against faults or manufacturing defects for a period of 12 month from first registration of the product on the support website www.maxpeak.tv. Maxpeak reserve the right to replace or repair a faulty meter. The warranty does not cover misuse or damage caused by dropping the meter or if the meter has been opened.

Declaration of conformity:

We, the manufacturer, Maxpeak AB (publ) Box71, SE-135 22 Tyresö SWEDEN declares that CAM (cable meter) meets the following standards and directives:

EN610 10-1:2001 & EMC 61326:1997 & RoHS

Technical department 1:st of February 2012



Recycle:

Please recycle the carton and packaging.

Do not throw out the NiMH battery, recycle!

Do not discard the meter at the end of useful life, recycle!

info@maxpeak.tv

www.maxpeak.tv